President's Message

Elbert Wilkinson, KQ3K

HAMFEST:
As reported last month, as of 9/2/20, Hamfest is ON! First Christian Church has again approved our use of their facilities. Successfully executing Hamfest will be our last major event to focus on for the rest of the year. Unfortunately, with most of our events cancelled due to the COVID-19 virus, it is our only major event this year. 2021 can't get here soon enough. Hopefully, things will return to normal next year for all of us.

Hamfest will be held on December 5th with setup on the 4th. Hamfest will be a little different from previous years due to the pandemic. The commercial vendors are anxious to attend because most hamfests this year have been cancelled due to the pandemic and they are eager to get back on the circuit. Carl, KC5CMX, has been in contact with the vendors and club members outlining the basic changes. Due to requirements for social distancing, we will need to limit the number of vendors and tables for each so that everyone can spread out. The hamfest committee is looking at other measures we can take to ensure a great hamfest and maintain the safety of everyone. Masks will be required.

I would be remiss not to mention one major risk that could upend our plans. The commercial vendors work a hamfest circuit to help spread their costs over several events that normally occur on successive weekends. The Tampa hamfest follows ours on December 11 and 12. At this point, Tampa has not reached a decision to proceed. They will make their final decision on October 14. If Tampa cancels, it would impact our vendors who need to make a profit to stay in business.   Your board and hamfest committee have discussed several contingency plans to proceed but with a different format. Several other Florida hamfests listed on the ARRL Hamfest webpage have also cancelled recently. We will see what happens and adjust accordingly.

Next Club Meeting

**October 20, 7:00 PM
via Zoom**

Silver Springs Radio Club
Proposed Slate of Officers for 2021

President – Bill Gillespie, KW5BG
V President – Jim Burgess, KN4MIV
Secretary – Ivory Williams, W6IVY
Treasurer – Tom Lufkin, W4DAX

Directors
Gilbert Gyarmati, K4GLG
Mike Condon, W9MNC
Wayne Brown, N4FP

This slate of officers will be presented to the club at the October 20th Zoom meeting. Voting will take place at the November meeting. The new board will serve from January 1, 2021 to December 31, 2021.

Special thanks to the nominating committee for their outstanding work:

Bill Gillespie, KW5BG, Chairman
Gilbert Gyarmati, K4GLG
Marty Brown, N4GL

**Silver Springs
Radio Club Net
K4GSO**
Mondays at 7:30 PM
146.610, PL 123

All of our plans are also contingent upon no further surprise restrictions by the various governmental entities. Hopefully all of this will work out, but some things and events are simply beyond our control. Club membership will be updated as our plans evolve, so stay tuned!

MEMBERSHIP:
Don't forget, MEMBERSHIP is still job #1. We actually have another new application or two. Older members, we need you to help new members, especially those recently licensed, so adopt someone. This is important for their success in the hobby and us as a club. The sheer volume of information and technical details can be overwhelming, so help them out. End of sermon for this month. Rinse and repeat next month!

NOMINATING COMMITTEE: See *Proposed Slate of Officers* on first page

ARES:
After many years of service, Ron Viola, KS4SW, Emergency Coordinator, and Carl, KC5CMX, Assistant Emergency Coordinator, have stepped down from their positions effective September 30. Both have devoted countless hours in the true spirit of amateur radio and emergency communication. This is what is expected of all of us with our FCC licenses. Congratulations on your "retirement" and thanks for service and all that you have done to promote ARES and amateur radio in our community.

Mike Condon, W9MNC, will be replacing Ron as EC. Mike has served as an AEC for some years and will need everyone's support as he transitions to his new role. Many thanks, Mike, for taking on this important job. ARES still needs someone to step into Carl's AEC role. Anyone interested, please contact Mike Condon. The position of ARES net control manager is also open for anyone interested.

HAM SCHOOL:
I ran across an interesting article on one of the political sites I monitor every day and curiosity led me to open the link and read it because of the subject – amateur radio. It seemed to be "out of place" on the site. The article is written by Michelle Thompson, W5NYV, an XYL electrical engineer, mother and amateur radio operator and how she got involved in amateur radio and also got her son involved. There is some technical stuff towards the end but don't let this deter you. She also gave a

presentation at last year's Hamcation. This is one smart lady and a great ambassador for amateur radio. Here's the link:
https://www.linkedin.com/pulse/open-source-amateur-radio-satellite-microwave-october-thompson/

Another interesting website was sent to me by club member, Maurice Schietecatte, N4LZ, where you can locate other hams located near you. This could be very useful in an emergency situation or for just meeting other like minded folks interested in amateur radio. https://haminfo.tetranz.com/map

UPCOMING EVENTS:
The next club General Meeting will be on October 20th via ZOOM. You will receive an invitation from me next week, so please watch for it in your email. A program is being planned as well as an update on Hamfest.

CQ WORLDWIDE DX CONTEST – SSB:
The CQ Worldwide DX Contest – SSB will take place on October 24 – 25th. Contest details are here:
https://cqww.com/

This is another excellent opportunity to practice and hone your phone operating skills. Bands allowed are 10, 15, 20, 40, 80 and 160. Power categories are High, Low and QRP. Don't forget to report your scores "real-time" to contestonlinescore.com/ via N1MM+ or N3FJP logging software. Let's see how many members working and reporting the event. It doesn't matter if you work the whole event or only have a few hours – they all add up on the overall club score. It is also fun and a means to test your station and antennas.

THE ORACLE:
Thank you to all the members who send Marty, N4GL, articles for the club newsletter. Your contributions help make our newsletter interesting and informative. It can be on anything you been doing, working on, experimenting with, etc. – you know the drill. Please send your articles to her at ---->>>>
N4GL.MARTY@GMAIL.COM

With a little luck, we will be done with all these COVID-19 virus restrictions and we can get back to normal. Stay well and safe.

Ham On and be Radio-Active! That is all.

VE Team has Special Test Session

Jim Burgess, KN4MIV, VE Chairman

On Monday, October 5, 2020, the SSRC VE Team held a special test session at the Marion County EOC. This was a culmination of a Technician class that Rich Erlichman, ND4G, and Chuck Richards were teaching. We tested 14 people (2 were not part of the class.) Altogether we had 10 people pass the Tech exams. Three of those went on to pass the General exam. We had one person pass the Extra exam. The class was composed of members of the MCSO and OPD. It was a busy but rewarding evening! Thanks to Maurice N4LZ, Bill KW5BG, Ron KS4SW, and Mike W9MNC for serving with me as VE's.

A History of Local Emergency Communications

Carl Berry, KC5CMX, AEC Marion County FL ARES

In 2011, we were about a year into the National Incident Management System (NIMS) program, still finding our way through the new field of interoperability. This was a show and tell for us at the hospital. It was a lot of fun. MERT, Marion County Emergency Radio Team is a group of hams that work with the sheriff's office. At the time, there was no ARES in the county.

Now we've morphed and beteeen these two groups plus the new county ARES group, to well over 80 members with some people in two or more groups. We all work together to accomplish the mission - to communicate, while maintaining the core identity and individuality of each group. All members are NIMS qualified and most are very proficient with WINLINK. All shelters and hospitals are covered for disaster comms and we have the capability to deploy to the field if required.

The county has 14 SHREK kits (SHelter REadiness Kits) for rapid deployment to for MERT. (http://aresmcfl.org/shrek/ and yes, the ps have been replaced!)

We even hold basic classes for WINLINK and have participants from throughout state (when there's no COVID-19).

Through this joint effort, MERT, ARES and the Hospital group lead the way in new and innovative ideas.

National Emergency Preparedness Month
Monroe Regional Medical Center
September 29-30 2011
Left to right: Earl Sweeney, K4LSB (MERT), John Wiley, W4FID (MERT), Fred Hay, K4SFA (MERT), Carl Berry, KC5CMX (MERT), Dave Welker, W2SRP (MRMC)

When we first started, one of the things we trained on was peer to peer WINLINK between the hospitals and the EOC, called Operation Smoke Signal. We would train every Wednesday (and still do but on a different day) on that plus on simplex and repeater phone ops, DStar/DRats, HF ops to points around the state, EOCs or to different hospitals.

In 2012 when ARES was reborn, the operators were already trained with the required NIMS courses and others required training, and proficiencies. We've been going strong ever since.

SSRC Member Biographies

Rich Erlichman, ND4G

I am a retired Electrical Engineer, and recently relocated just SW of Ocala, FL. I am active with the radio club down in **T**he **V**illages **A**mateur **R**adio **C**lub (TVARC-http://www.k4vrc.com), where I used to live. I help serve as the club's webmaster, and ARRL/VE Team Liaison.

I caught the (ham) bug when my father brought me over to one of his long time childhood friends who sat me down in front of a full suite of Collins S-Line, and with the microphone in hand. The next thing I knew I was talking with someone on another continent. Shortly afterwards, as a senior in High School in 1969, and thanks to some serious persuasion and tutoring by a friend, I obtained my (first) Novice license WN2JAJ in Brooklyn, NY. Due to going away to college and then enlisting into the USAF, I went off the air for a while. A few years later, while stationed at Fort Drum, near Watertown, NY, I then obtained my second Novice License in 1974 as WN2UMF. I upgraded to General class in 1975 as WA2UMF. In 1977, after being assigned to Barksdale AFB near Shreveport, LA, I upgraded to Advanced class as WD5GCD, and then to the Extra class KB5M in 1979. After separating from the USAF, I moved to Ft. Lauderdale, Florida in 1980, and I modified my license one last time, to my current callsign of ND4G.

Some of the companies I worked for after the Air Force include the Bendix Corporation (Air Transport Avionics Division), Novatronics (military/avionics power supplies), Lexicon (PointOf Sale), Racal Milgo which became Racal Datacom (Data Communications), Siemens (Telephone Switch Division), and Answers On Demand (AOD Software).

Some of the more interesting projects I worked on as an EE was developing the MLS, or Microwave Landing System (Bendix), developing a Credit Card Point of Sale (POS) system at the leading edge, or beginning of the Point of Sale industry (Lexicon), Network-Management software (Racal), and the LNP or the Local Number Portability feature (Siemens).

I had a VHF/2 meter repeater (145.27) in Sunrise FL running under my callsign (ND4G) from 1989-1998, while associated with the Racal-Milgo/Racal-Datacom Amateur Radio Club.

I operate a little on VHF/UHF. My first love though is on HF, contesting, and the digital modes, mostly RTTY, PSK31, and the new FT8. I got my start with digital modes using RTTY back in the 1980s-90s with a home brew, self designed interface using some of the very early personal (Wang) computers, and then Commodore-64, eventually migrating to a PC.

Current equipment includes a Kenwood TS-590S, Elecraft KPA500, RigBlaster Advantage, and a Winkeyer USB.

To get a better look at Rich's projects, look up ND4G on QRZ.com. To have you biography featured, send information to Marty Brown n4gl.marty@gmail.com.

Trailer Hitch Mount HF Antenna Testing

Darrell Franchuk – KG4CCB

In February we bought my wife a new Subaru Forester and she bequeathed to me her 2015 Forester. Since then I have pondered what radio(s) I wanted to install; did I want an HF/VHF/UHF rig or just VHF/UHF? After some consideration I determined that would be guided by what antenna(s) I would install. I did not want to drill any holes and I did not want a lip mount somewhere. For VHF/UHF I lean toward a Diamond motorized mount on a roof luggage rail with a dual band antenna that can be raised when I want to use it but kept lowered when not in use. The only option I can see for an HF antenna is a trailer hitch mount even though I recognize it is considered probably the least effective and desirable. Before proceeding, however, I needed to know objectively if it is a reasonable option. If not, then my radio choice will be limited to VHF/UHF.

I chose to test an MFJ Hamstick after chatting with a Levy County ham who uses these on his very nicely equipped pickup truck. He simply installs the appropriate Hamstick for the band he wants to work. As I do not expect to do a lot of mobile HF operating, this appealed to me. As to performance, I decided to use WSPR to test antenna propagation.
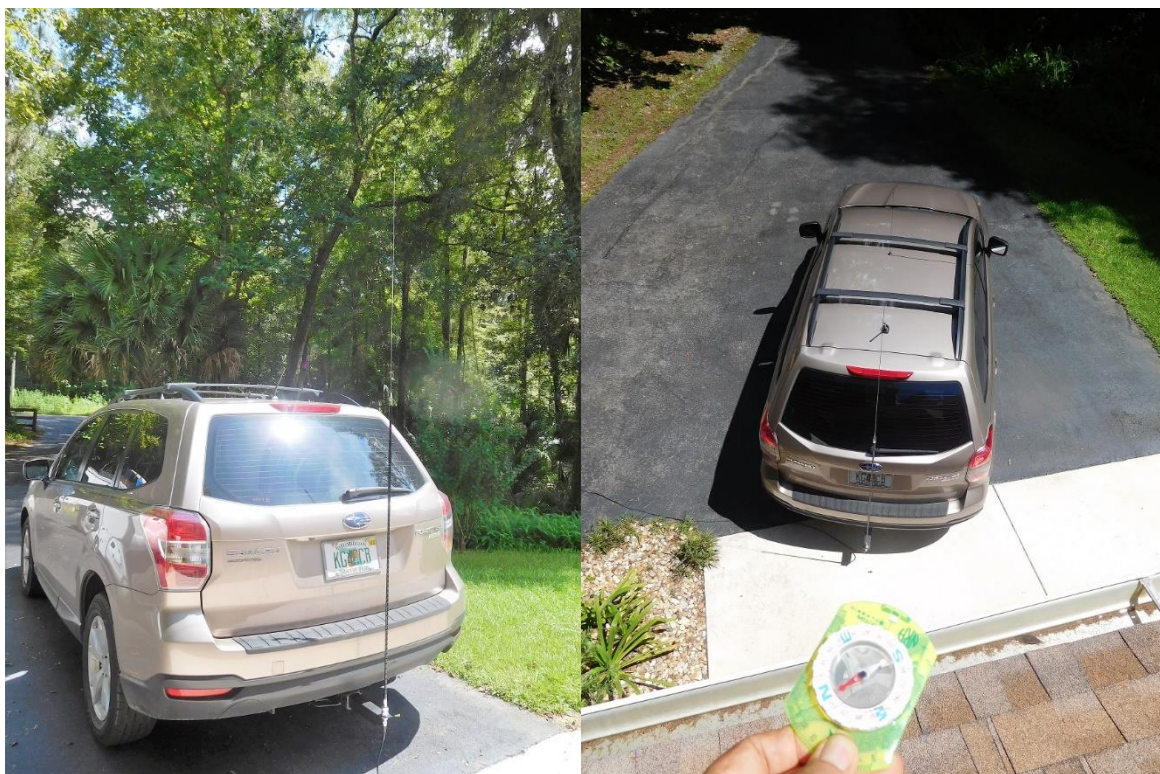
I mounted a 20-meter Hamstick in the trailer hitch mount I purchased form Main Trading Co. in Paris, TX and parked MY Forester in the driveway, which oriented it SE and fed it with my FT-818 set to 2.5 watts. The initial transmissions were received to the northwest and at a 90-deg angle of that to the northeast. Subsequent transmissions were received more broadly in the U.S., but not a heavy density of locations. Next, I reoriented the Forester to the northeast and again the same pattern. And then the Forester was reoriented to the southwest. Again, a similar pattern, which perplexed me but left me thinking the antenna was generally omni-directional. But then I considered my location here in Florida as related to the U.S. geography. There are not many locations to the SE and SW to receive my transmissions. So, then I reoriented the Forster to the northwest, and what a dramatic change. Locations in a broad range of U.S. locations received the transmissions.
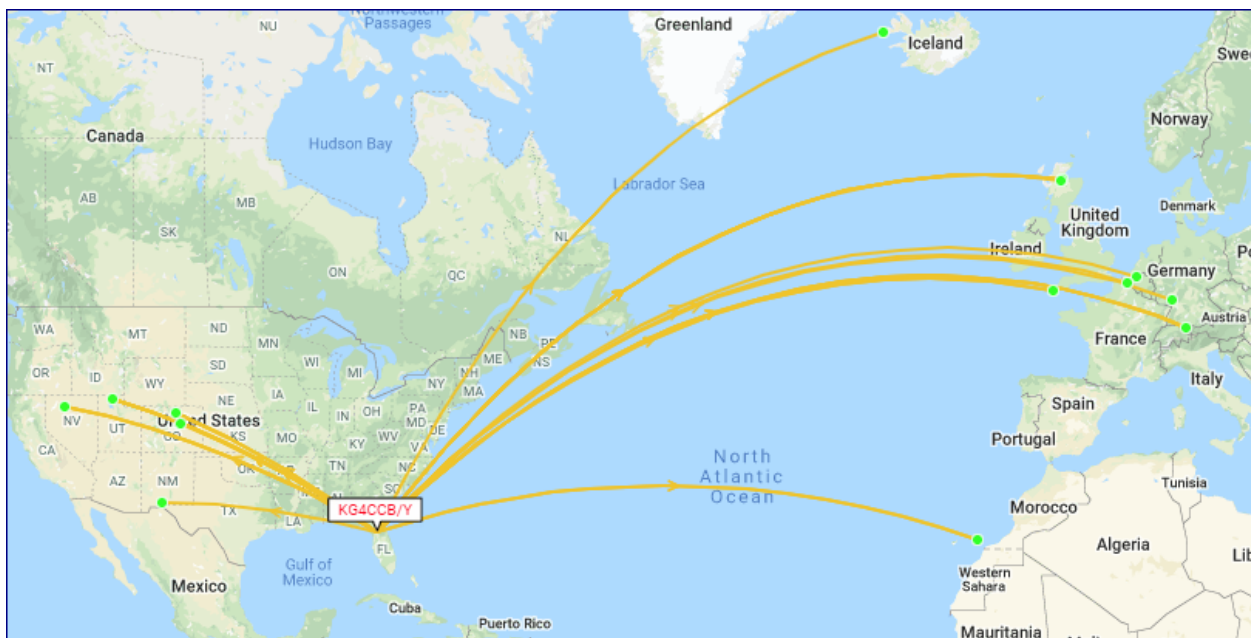
Transmissions

Orientation	Total Spots	# Hours	Distribution	Most km	Least
Southeast	930	13.25	Western US, Europe, Iceland, Canary Islands	7799	983
Northeast	380	15	Like above	7799	1471
Southwest	73	2.5	Much of US, Alaska, Hawaii	7409	1522
Northwest	560	8	Whole US, Europe, Iceland, Canary Islands	13014	756

Receiving

| Orientation	Total spots	# Hours	Europe	Other	Most km	Least km
Southeast	763	24	22	4	15589	457
Northeast	585	26	16	3	7757	1137
Southwest *	127	2.5	6	2	7277	1002
Northwest	610	25	7	3	15589	457

*Cut short considering similar pattern

A few graphics below illustrate the propagation results. Notice that SE orientation results in more dense European contact distribution and less so in U.S. while NW orientation results in less European contact and more within the U.S. Results are skewed by the limited amount of receiving points to the southeast of Florida.

20m transmissions with FT-818 and Tow Hitch Hamstick with vehicle facing SE
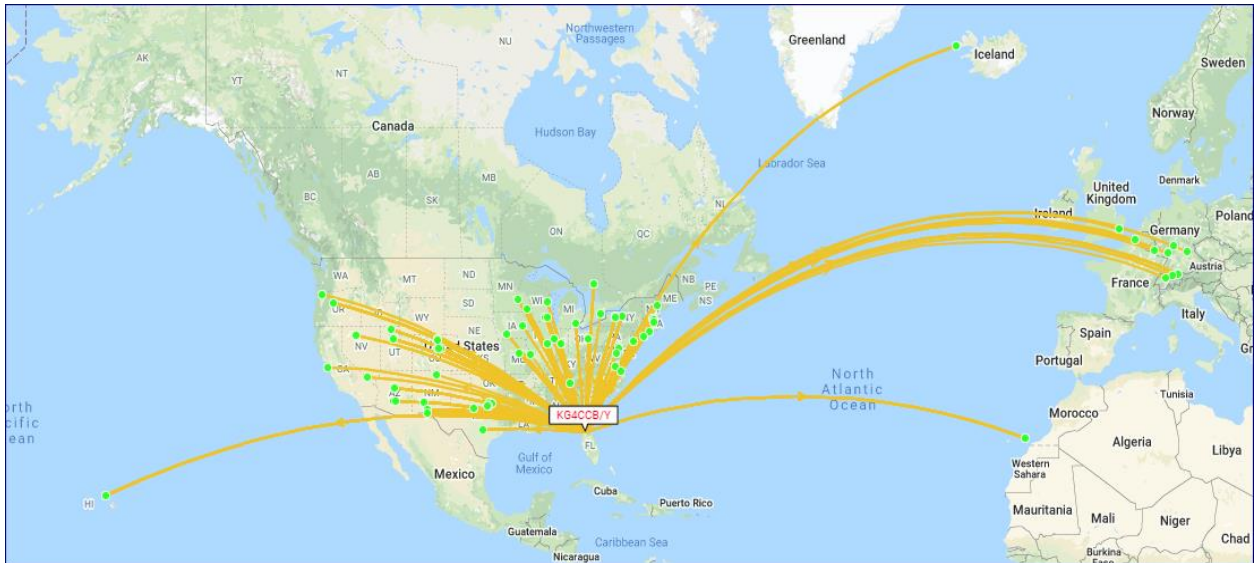
FT-818 transmitting with Tow Hitch Hamstick on 20m with vehicle facing NW

In consideration of the above, it seems to me that mounting an antenna on the tow hitch will achieve reasonable results. It also seems that propagation will be greatest along the long axis of the vehicle. But that could me more accurately determined if I were testing in Kansas City near the geographic center of the U.S., or similar. Perhaps others, more knowledgeable and experienced with propagation, will have a better interpretation.

News You Can Use

The newsletter will be posted to the K4GSO website. Send information and pictures to **Marty**

SSRC Logo Shirts & Caps
Green Clover Key Card
Perry Field Access
Membership Application
Buy/Sell/Trade
QST NFL – NFL Section Newsletter
Silver Springs Radio Club Website
NFL Section Website
WA7BNM Contest Calendar
NG3K DX

Club Minutes and Financial Reports

2020 SSRC Officers

President - Elbert Wilkinson, KQ3K
V President – Jim Burgess, KN4MIV
Secretary – Ivory Williams, W6IVY
Treasurer – Bill Gillespie, KW5BG

Directors
Ron Viola, KS4SW
Mike Condon, W9MNC
Wayne Brown, N4FP

Committee Chairs:
Membership – Carl Berry, KC5CMX
Trustee K4GSO – Wayne Brown, N4FP
Newsletter – Marty Brown, N4GL

Upcoming Events/Meetings

Click here to sign up.

ARES Update - Ron Viola, KS4SW
All ARES meetings are canceled unitl further notice.

Education/Testing – Jim Burgess, KN4MIV
Testing will be Nov 10, 7 PM, Green Clover Hall

Customizing a flagpole for an off-center fed vertical dipole ham radio antenna

by Pete Castella, N4CQN

The ham radio community is used to getting creative, and I was able to test that by customizing a regular flagpole into a ham creativity radio antenna recently. This is some information about my experience creating that and some lessons learned along the way.

I live in an HOA community and therefore have several restrictions on having antennas. A flagpole is a good option to use for antenna, and as a veteran it's something I like to display anyway. Vertical flagpole antennas require radials. I previously converted one flagpole to a vertical antenna using radials. However, my grass cutters cut them twice so I needed to find a new option that didn't use radials.

What I selected

I did a lot of research first and decided to use an off-center fed vertical dipole. This way I would not need radials, and I only had to put my coax in conduit.

(This article from Ham Radio Secrets was a big help to me: www.hamradiosecrets.com/off-center-fed-dipole.html).

I decided to order from TelePole Manufacturing (www.tele-pole.com) because their flagpoles were heavy and would also support the modifications needed to make it into an off-center fed vertical dipole. Their reviews state that their poles have sustained winds of 80mph with gusts of 100mph.

There are many ways to set up an off-center fed vertical dipole antenna. I chose a 75/25 off-center fed because it enabled me to have the connections down low in case I needed to make adjustments. Plus, it wouldn't interfere with raising and lowering the flag itself.

After consulting with my Elmer (Bert Garcia N8NN), I decided to go with my coax inside the pole rather than a ladder line because I would have had trouble keeping the ladder line from touching the insides of the pole. I pre-ordered white acetron rods from Zoro (www.zoro.com) that were 2.125" diameter x 1 foot long. I sized what I wanted to fit inside the flagpole. That cut down on grinding and sanding so I only had to grind and sand the half part that went into the sleeve. I selected acetron over nylon because they were less susceptible to temperature changes.

Creating the antenna and customizing the flagpole

The sleeve that comes with the flagpole is extra heavy aluminum and I inserted the ABS sleeve into it to cut down on the diameter so it wouldn't have a big wobble to it. That means that I had to grind my acetron rod down to size too, though. I ended up using a hand-held grinder to get it down just 1/100th of an inch. Getting everything precise was important all along the way of this project.

The flagpole came with a type of paint/coating on it that I grinded off with a wire brush in order to make good contact with the next section.

I used an orange traffic cone spray painted to match the flagpole to camouflage the bottom section, which is insulated from the ground. If I ever have to take the pole down due to high winds (I live in Florida so hurricanes can be an issue), I could rest it on top without damaging it.

All sections of the flagpole and coax were all checked along the way using my Fluke for conductivity. I ensured each section made good contact using Noalox Anti-Oxidant Compound to improve electrical conducting. Even the coax going in and out was secured and protected with grommets.

Inside the pole, I taped all of the wires really well so no moisture can get through. Connections have to be sealed water-tight with 3 layers of tape.

Most people do a pole at the ground but I didn't want mine to be seen. I used an irrigation box about 10" long x 15" wide x 10" high. I ended up putting a small plastic rack inside to hold the line isolator and tuner up high so they will not ever be submerged in water.


Other considerations
There were many other things I had to keep in mind along the way during this project. Just some of these included:

- I ordered a drill bit for plastic. It doesn't drill like a normal bit; it scrapes and therefore does not overheat the plastic. I used a 3/8" one.
- I used a 7/8" drill bit for the flag pole grommets.
- I used a drill press to drill through everything to make sure it all lined up and drilled straight through for the bolts on the other side.
- I made sure to get the hardest 3/8" hex bolts – grade 8. Even if a bit more costly, I erred on the side of safety throughout this project.
- The cleat had to be moved down on the flagpole and it was attached so tight that I had to drill the bolts out in order to be able to move it down. But, this reinforces that the flagpole I chose was of good quality.
- I had to use the space where I had previously installed a prior flagpole so I had to make a lot of modifications to that hole to make this new flagpole fit.

Tuning

My radio is a Yaesu FT-991A. The tuner I selected was the LDG-RT-100 and an MFJ line isolater. I will use an antenna switch to move between 3 options. (Had I known the LDG-RT-100 would not do more than 30 watts on digital, I would have gotten the LDG-RT-600).

Here is a diagram of my flagpole and station system:
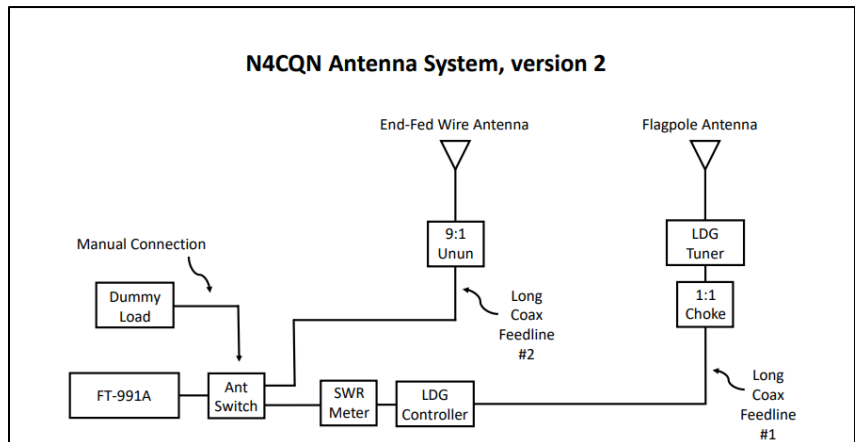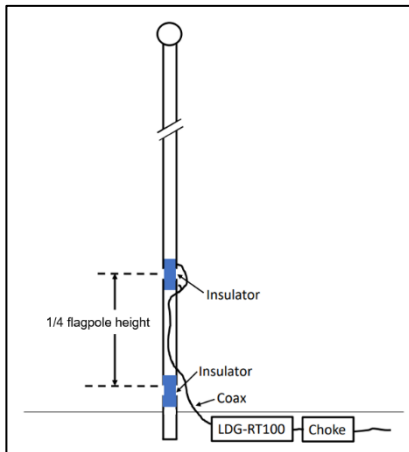
Results

Immediately after getting the flagpole up, I was able to make many contacts!

Overall, this was a fun project and something I'd recommend to any other hams needing to get around HOA or other antenna restrictions. I'd be happy to share more details and swap best practices with anyone else out there too.

October QSO Parties

New York	10/17/2020	10/18/2020	Rochester DX Association
Illinois	10/18/2020	10/19/2020	Western Illinois Amateur Radio Club

Bang for the Buck - QCX QRP CW Transceiver

Bert Garcia N8NN

Here's feature-packed, high performance, single-band 5 watt CW transceiver kit that you can easily build -- the QRP Labs QCX (1). Select any band 80-17 meters. You get digital readout with two VFO's, split operation, RIT, built-in Iambic keyer with 12 memories and adjustable repeat and delay, 200 Hz CW filter, noise blanker, on-screen CW decoder, QSK or semi-break in, and S-meter. WSPR and CW beacon modes are built-in, and you can add a GPS receiver for WSPR accuracy if desired by plugging it into the CW key jack. You can use a computer interface for CAT control. A computer is not required to install or operate the transceiver.

The QCX built-in test equipment -- voltmeter, RF power meter, frequency counter, signal generator -- make initial alignment simple. I paid $49 for this excellent transceiver. The new improved QCX+ version sells for $55 today, sold by QRP Labs (1)..

I selected 40 meters for my build. The double-sided circuit board comes with a pre-programmed microprocessor. All components are through hole mounted, so there is no surface mount soldering required. All the controls and connectors mount on the board, or you can choose to leave them off the board as I did so the transceiver can be mounted in a case you provide. Figure 1 is my QCX-40 undergoing an initial smoke-test and alignment, making 4.15 watts into a dummy load. There was no smoke, and the error free build has worked perfectly for months without a failure!
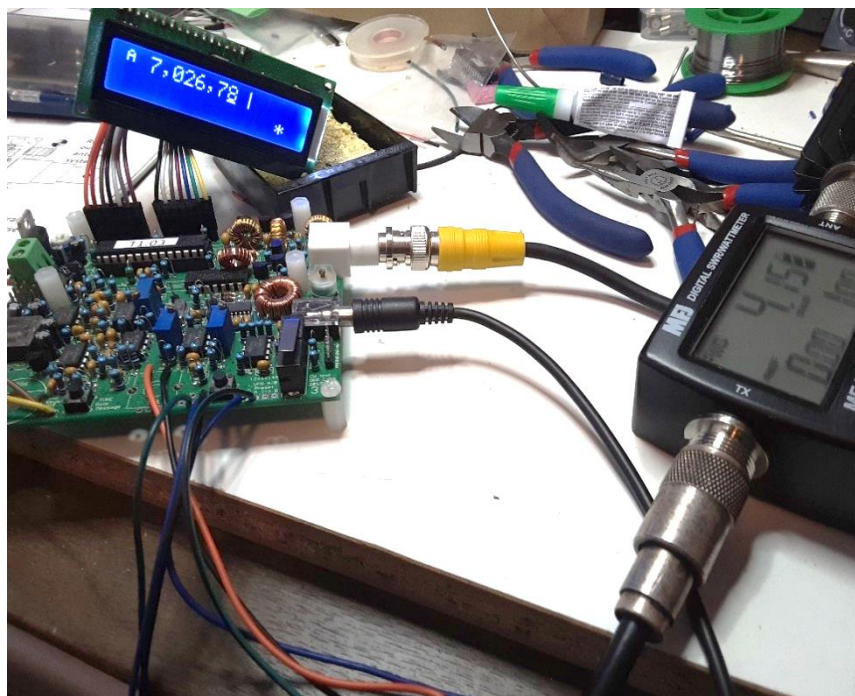

Figure 1: My QCX-40 initial test and alignment.

I decided to mount my QCX-40 in a case (2) and add a 120 VAC power supply (3) as well as Anderson PowerPole connectors for battery power to make this a versatile radio. I included a PTT modification to interface with the QRP Labs 50-watt amplifier to be described in a future article. I also added an interface for an external speaker with volume control, and fuses on both the AC and DC lines. Figure 2 shows the front panel with the multi-function pushbuttons labeled as left/center/right, LCR. The buttons select the VFOs and other operating parameters as well as stepping through the extensive menu system. Figure 3 shows the rear panel three-position switch to select between internal AC and external DC power, and the AC on/off switch.

Figure 2: QCX-40 front panel.

Figure 3: QCX-40 rear panel.

Looking inside my QCX-40 in Figure 4, the 120 VAC power supply is on the left and ribbon cables extend the digital display to the front panel.
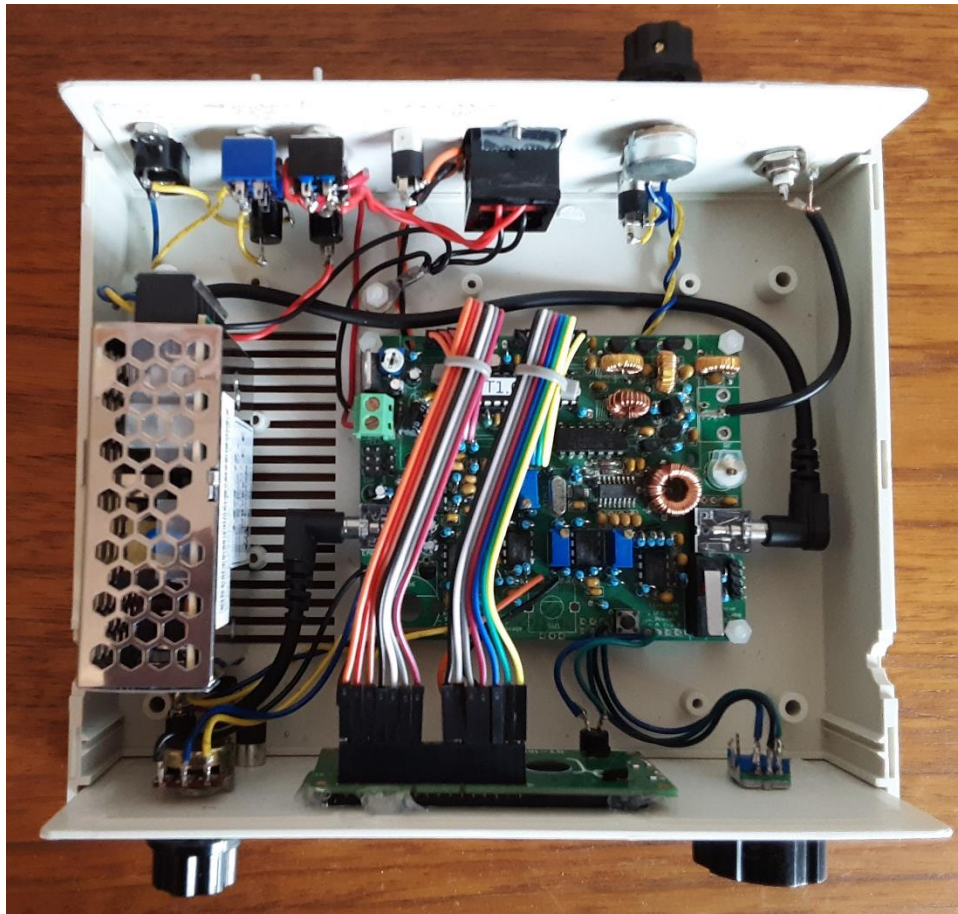
Figure 4: Inside my QCX-40.

So, why build your own gear? It's simple -- "Vegetables grown in your own garden taste better!" When you build your QCX transceiver, you can keep it simple or add as many bells and whistles as you choose. The newer QCX+ version has a separate front panel circuit board that can make installation in a case easier. I encourage you to try the QCX+ transceiver since it is simple to build and quite inexpensive at $55 for a complete high-performance CW radio. Check out the QCX Builder's Gallery (4) for photos to inspire your one-of-a-kind QRP transceiver build.

References:

1. QRP Labs QCX https://qrp-labs.com/qcx.html original version, replaced by the QCX+ https://qrp-labs.com/qcxp.html, $55 plus shipping.
2. Banggood instrument case https://www.banggood.com, $10.99 + shipping.
3. Power Supply TDK/Lambda LS25-12 https://www.digikey.com $17.50 + shipping.
4. QCX Builder's Gallery https://www.qrp-labs.com/qcx/qcxgallery.html.

Pretty as a Picture
by Bert Garcia N8NN

Appearance is everything. After finishing your electronic project and putting it in a nice case, you face the challenge of how to add panel labels that won't spoil the appearance of your successful build. You can use a tape label maker, commercial wet transfer decals, or heaven forbid, a magic marker. After Googling around the Internet, I've found a neat way to solve the problem of making labels for homebrew projects -- print an overlay that covers the whole panel.

Applying separate labels by any method will leave visible lines that are not attractive. If you print an overlay that covers the whole panel, there are no visible lines around the labels. I used a drawing program, a scanner, a printer, and several types of printing stock. Here's how I did it.

First, scan your panel. Figure 1 is a scan of the panel with everything removed so it will lay flat on the scanner bed.
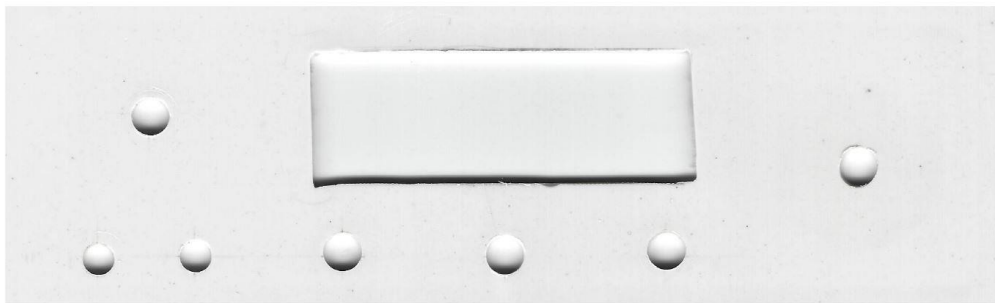

Figure 1: Scanned image of the blank panel.

Import the scanned image into a drawing program that will print an image in actual size. I used PhotoShop Elements. Microsoft Paint and Microsoft PowerPoint will not work because they do not print accurately sized images. Test your software by scanning a ruler and comparing the printed image with the ruler. If they match, you're good to go.

In your drawing program enter the label text and any other artwork you want. To obtain the correct clearance around knobs, add shapes with the diameter of the knobs. In Figure 2 I have added labels and shapes for the knobs. The knob shapes are for reference only and are removed before printing.

You can personalize your project to suit. I made a logo with my callsign and CQ DE N8NN spelled in Morse Code font to draw a line. This panel is for my QCX-40 QRP transceiver kit that I will describe in another article. Your panel overlay is only limited by your imagination!
To print the overlay, remove the scanned image and any reference shapes before printing.

Figure 2: Labels added and temporary shapes of knobs for reference.

I used several types of media for the overlay -- Avery 4397 transparent sticky project paper, heavy card stock, and glossy photo paper. If your media does not have any adhesive, double stick tape will hold it to the panel. Figure 3 shows the result. Figure 4 show some imagination!

Figure 3: Panel overlay using transparent sticky project paper.

Figure 4: Panel overlay with a tropical flavor printed on glossy photo paper.

Good luck with your next homebrew project! Enjoy!

Reference:
Avery 4397 Project Paper, clear https://www.officedepot.com/a/products/393926/Avery-Full-Sticker-Project-Paper-4397/, $9.49 per 7 sheet package.

K1USN Slow Speed Test (SST)
Rich Hoffman, K1DJ

For those who prefer a more leisurely CW pace, or are new CW operators or contesters, this just might be what you're looking for!

00:00-01:00 UTC Mondays
(That's Sunday, 8:00 PM EDST)